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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,502	10/20/2006	Jean-Pierre Gazeau	1017753-000228	6565
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EXAMINER GOLDBERG, BRIAN J				
ART UNIT 2861		PAPER NUMBER		
NOTIFICATION DATE 12/24/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/579,502

Applicant(s)

GAZEAU ET AL.

Examiner

BRIAN J. GOLDBERG

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19-21 and 26-32 is/are rejected.
- 7) ☒ Claim(s) 18 and 22-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/20/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of group I in the reply filed on 8/20/09 is acknowledged. The traversal is on the ground(s) that the groups share the same special technical features of the print robot since claim 29 is dependent on claim 17. This is persuasive and the restriction requirement has been removed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 17, 19-21, 26-29, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase et al. (US 6939407) in view of Stadler et al. (US 6443058) and Glass (WO 2004016438).

3. Regarding claims 17 and 19-21, Kawase et al. discloses "an inkjet printing assembly (see Fig 9), means for displacing and orientating this printing assembly along several axes (X, Y, Z, α , β , γ of Fig 9), at least one control unit (17 of Fig 8 and CPU 69) controlling these means and...wherein said robot is a print robot with five motorized axes (see Z, α , β , γ and X (not shown) motors of Fig 9) and wherein the displacement and orientation means comprise: a carrier with three degrees of freedom in translation, which ensures positioning of the printing assembly allowing its horizontal, vertical and

depth translation (see 53 of Fig 9) ...and five servomotors respectively associated with the five axes of this robot (see Z, α , β , γ and X (not shown) motors of Fig 9)."

4. Kawase fails to teach "a drying device for the ink sprayed onto said surface" and "a wrist with two degrees of freedom in rotation".

5. Stadler et al. teaches "a drying device for the ink sprayed onto said surface (6 and 7 of Fig 1)." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a drying device, as taught by Stadler et al., in the apparatus of Kawase et al. to achieve the predictable results of quickly drying the ink after it is ejected to prevent excessive bleeding or running, thereby improving print quality.

6. Glass teaches "a wrist with two degrees of freedom in rotation which supports and ensures the orientation of the printing assembly allowing its rotations (Rx, Ry) along two perpendicular axes (see Fig 3 with rotation of 30K)... the wrist comprises two identical systems screws/rods/cranks each linked to a mobile carriage (while only a single system is disclosed, *In re Harza*, 274 F.2d 669, 671 indicates that it would be obvious to duplicate a part for multiple effect)... the wrist supports the ink drying device (for the combination of Glass with the drying device of Stadler)." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide two degrees of freedom in rotation while also supporting the drying device to achieve the predictable results of allowing the printhead to print on a curved surface while maintaining the appropriate distance between the printhead and surface to be printed, as stated by Glass.

7. Regarding claims 26-28, Glass further teaches "the printing assembly comprises at least one printing block provided with several printing heads using inks of different colors (page 6, line 19-21)" and "each printing block comprises four printheads respectively using yellow, cyan, magenta and black inks (page 6, line 19-21)" and Stadler et al. teaches "the inks are ultraviolet drying inks (col 9 ln 33-34)." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include the printing block taught by Glass and substitute the ultraviolet drying inks taught by Stadler et al. in the apparatus of Kawase et al. to achieve the predictable results of performing high quality multi-color printing that allows for more rapid drying of the ink to enable a higher quality print.

8. Regarding claims 29, 31, and 32, Kawase et al. discloses "- positioning a medium (12 of Fig 9) with respect to at least one robot as claimed in claim 17 (see rejection of claim 17 above citing Kawase et al. in view of Glass and Stadler et al.),- initial setting of said at least one robot and positioning its/their head(s) with respect to the surface of the medium, at the point where printing of the image is to start (by way of motors Z, α , β , γ and X (not shown) and see Fig 8, col 11 ln 55-56), - return to a rest configuration (see Fig 9)."

9. Glass teaches "- printing the image on said surface with successive printing of the different vertical strips forming the image (see 22 of Figs 1-6)." It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to perform printing in strips, as taught by Glass, using the apparatus of Kawase et al. in view of Stadler et al. and Glass to achieve the predictable result of enabling printing on

a curved surface while maintaining the appropriate distance between the printhead and surface by adjusting positioning between strips, as stated by Glass.

10. Regarding claim 31, Kawase et al. further discloses starting printing at a lower left-hand corner of the surface (see Fig 1) and it would be obvious to one of ordinary skill in the art based on the disclosure of Kawase et al. that printing could be started at any given position based on positioning the printhead using the various motors.

11. Regarding claim 32, Glass teaches printing in strips but does not explicitly state the condition where the strips are approximately 7 cm. However, it is not inventive to discover the optimal value of an independent variable where such a discovery could be achieved through routine experimentation—i.e., where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawase et al. (US 6939407) in view of Stadler et al. (US 6443058) and Glass (WO 2004016438) and further in view of Desormeaux (US 20020070988).

13. Kawase fails to teach “a prior surface preparation step so as to make it clean and uniformly white”.

14. Desormeaux teaches “a prior surface preparation step so as to make it clean and uniformly white (Par [0034]).” It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to prepare the printing surface to make it clean, as taught by Desormeaux, to achieve the predictable results of clearing any

debris that may diminish or interfere with printing, thus enabling a higher quality printed image free of defects.

15. Claims 18 and 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN J. GOLDBERG whose telephone number is (571)272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art Unit 2861

/Brian J. Goldberg/
Examiner
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